

ORIGINAL PAPER

PRIMARY CARE

Fear of COVID-19 and stigmatization towards infected people among Jordanian people

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Abstract

Aim: This study aims to explore the prevalence rates of stigma and fear among people in Jordan during COVID-19 pandemic and to assess socio-demographic and personal factors contributing to the prevalence rates of fear and stigma among people in Jordan during COVID-19 pandemic.

Method: Cross-sectional descriptive design was utilized to attain the study aim. An anonymous online survey targeting people of Jordan was used and distributed to adults in Arabic language. The survey included a previously validated fear scale. Stigma was measured using developed instrument by authors.

Results: The prevalence of fear among study participants was 52%. In addition, the prevalence of stigma towards infected people and their contact was 64%. The predictors of stigma towards infected people with COVID-19 and their contact were income, living area and downloaded application to trace COVID-19 cases. Moreover the predictors of fear were income living area and downloaded application to trace COVID-19 cases ($P \leq .001$).

Conclusion: More than 50% of the respondents were afraid from COVID-19 and 64% had stigma towards infected people and their contact during the COVID-19 pandemic. The present study highlights the need for an intervention that provides psychological support to citizens during the pandemic.

1 | INTRODUCTION

The rapid global increase in the number of individuals infected with the COVID-19 virus has increased public fear and concerns in many places.^{1,2} Because of this fear and concern, a new kind of discrimination to people affected with COVID-19 or even who contract the patients has emerged in some communities.¹ For example, Hong Kong and Taiwanese individuals have recently become afraid of contacting Koreans and Japanese because of the recent outbreak in these communities.^{2,3}

Excessive fear that accompanied with economic and social impairment during COVID-19 pandemic can cause mental health problems that might impact both the individual and the whole community.⁴⁻⁶ For example, mental health problems are strongly associated with

suicide attempts in individuals who suffer from depression and anxiety.^{7,8} In fact, in some countries, there is an increase in the number of suicidal attempts in response to COVID-19 outbreak.⁸ The mental health problems associated with COVID-19 could be more severe in countries with limited resources such as Jordan.⁹⁻¹¹ It is not uncommon to change in vital and scientific data about pandemic to change frequently and rapidly.¹² Fear is not an individual case; it is a group phenomenon related to the popularity of the social media all over the world. As a result, reducing fear and stigma among individuals are vital to control the spread of COVID-19. Stigmatization that related to fear from COVID-19 may cause to refute early symptoms that are clinically relevant and to manage it in the early stages.¹³

Based on the previous context, there is an urgent need to carry out studies concerning the fear and stigma in response

to COVID-19 in the different countries. Therefore, the present study aimed to explore the prevalence rates of stigma and fear among people in Jordan during COVID-19 pandemic. In addition, socio-demographic and personal factors that contribute to the prevalence rates of fear and stigma during the pandemic were also examined. The expected findings could set the stage for interventions that provide psychological support to Jordanians during the pandemic to ameliorate that negative impacts of the pandemic on the population.

2 | MATERIALS AND METHODOLOGY

This cross-sectional and survey-based study was conducted in Jordan. The researchers used the G*Power software version 3.1.92 to calculate the required sample size. A significance level of 0.05, a power of 0.95 and 11th variables were used with a medium effect size of 0.20 resulting in a minimum number of subjects being 1200. However, since using electronic surveys have a low response rate, the researchers sent 2000 surveys to guarantee enough responses. A total of 2000 potential participants were contacted who aged ≥ 18 years and who could understand Arabic at least at sixth grade, where a flyer was sent to them to participate in the study by Google forms. Email, WhatsApp and other social media were used to invite the participants and send surveys. Almost 1668 survey were returned where 13 of them were excluded for missing data. Thus, the total number of surveys included in the study was 1655 surveys. Data collection began in June 2020 and closed in August 2020.

When participants received and clicked on the link, they were automatically navigated to the information regarding the research and informed agreement. After agreeing to participate in the survey, they were asked to complete the demographic information. Then several sets of questions that the respondents had to answer sequentially appeared. The socio-demographic factors included education, career, gender, domicile, residential area and religion. The study was approved by the institutional ethics committee.

2.1 | Ethical consideration

The study was approved by the Institutional Review Board (IRB) of Jordan University of Science and Technology. A detailed letter for the purpose, benefits, risks and voluntariness of participation was sent to the potential participants. After that, an online consent form was sent to participants who agreed to participate in the study, and they instructed to read the informed consent carefully and call the authors for any concerns. If there is no concern, participant was asked to click agreement button at the end of the consent form. The survey was anonymous since the participants not asked for any identifying information in the study questionnaire. Since the study instruments may include some items that have the potential of eliciting negative feelings, participants were informed that they could refrain from answering any questions that may elicit distress. Completed

What's known

- The rapid global increase in the number of individuals infected with the COVID-19 virus has increased public fear and concerns in many places
- Reducing fear and stigma among individuals are vital to control the spread of COVID-19.
- Mental health problems are strongly associated with suicide attempts in individuals who suffer from depression and anxiety.

What's new

- The prevalence of stigma towards infected people and their contact is high.
- The predictors of fear from COVID-19 are income, living area and downloading application to trace COVID-19 cases.
- The predictors of stigma towards infected people with COVID-19 and their contact were income, living area and downloading application to trace COVID-19.

surveys were automatically saved on Qualtrics software, which is password protected and can only be accessed by the study authors.

2.2 | Stigma towards COVID-19 infection instrument

The COVID-19 stigma measures were used to measure the degree of devaluation and discrimination that impacted people with COVID-19 infection. This was a self-administered questionnaire originally developed by See et al¹² was administered on attitudes of discrimination, acceptance, and fear towards previous infected or people exposed to COVID-19. This tool consists of three aspects: discrimination, acceptance of COVID-19 previous infected and individuals who exposed to them such as healthcare providers, and fear (the coefficient alpha for discrimination was 0.83, 0.56 for acceptance, and 0.72 for fear). The response of the questionnaire was yes (2 point) or no (1 point) answers.¹² This questionnaire was adapted and translated by the authors and used to calculate the perceived amount of discrimination from individuals towards people previous infected with COVID-19 and who exposed to them. The Cronbach alpha of the scale = 0.87.

2.3 | The fear of COVID-19 infection instrument

The Fear of COVID-19 Scale, a 5-item scale, has robust psychometric properties. It is reliable and valid in assessing fear of COVID-19 among the general population and was reported to be useful in allaying COVID-19 fears among individuals.⁴ Participants were asked

to rate their agreement with each statement on a 5-point scale from “1—strongly Disagree” to “5— Strongly Agree.” greater scores indicate greater fear. The Cronbah alpha of the scale = .87.⁴

3 | RESULTS

The total number who agreed to participate was 1655. The number of female participants was 1056 (63.8%). The age range was from 18 to 65 and the mean age was 29.5 (SD = 7.7). See Table 1

3.1 | Fear towards COVID-19 outbreak

The prevalence of fear among the participants was 52.7% (n = 872) and the mean of fear was 21.8 (SD = 7.63). Many respondents mentioned that they are very afraid of the COVID-19 virus (M = 3.67, SD = 1.200). They also mentioned feeling uncomfortable thinking about the COVID-19 virus (M = 3.50, SD = 1.193). In addition, when they watched news and stories about the COVID-19 virus on social media, they were tense or anxious (M = 3.27, SD = 1.290). See Table 2.

3.2 | Stigma towards infected people with COVID-19 and people exposed to infected

The prevalence of stigma towards infected people and exposed to infected people among the participants was 64.8% (n = 1058) and the mean of fear was 11.5 (SD = 1.34) (Table 3). People who have

TABLE 1 Demographic and work characteristic of study participants (N = 1655)

Variable	Category	N	%
Sex	Male	598	36.2
	Female	1056	63.8
Social status	Single	943	57.0
	Married	645	39.0
	Divorced	66	4.0
Monthly earning	Less Than 700	1081	65.4
	700 To 1400	424	25.6
	More Than 1400	149	9.0
Living area	Urban	941	56.9
	Rural	713	43.1
Type of Job	Governmental	375	22.7
	Private	951	57.5
	Not Working	328	19.8
Academic degree	Less Diploma	235	14.2
	Associate	164	9.9
	Bachelor	730	44.1
	Higher Degree	525	31.7

been infected with COVID or contacted a patient should expect some restrictions on their freedom (66.8%). A recovered COVID-19 patient must be isolated (77.1%). People who have been infected with COVID-19 infection showed not be allowed to work (47.4%).

3.3 | Predictors of fear towards COVID-19 outbreak

Multiple regressions test was conducted to determine the predictors of fear towards COVID-19 outbreak. The model was significant ($F = 10.89$, $P \leq .001$). The predictors were income ($B = -0.208$, $P \leq .001$), living area ($B = -0.089$, $P \leq .001$) and downloaded application to trace COVID-19 cases ($B = 7.34$, $P \leq .001$) (Table 4).

3.4 | Predictors of stigma towards infected people with COVID-19 and people exposed to them

Multiple regressions test was conducted to determine the predictors of stigma toward infected people with COVID-19 and people exposed to them. The model was significant ($F = 17.66$, $P \leq .001$). The predictors were age ($B = -0.118$, $P \leq .001$), gender ($B = -0.093$, $P \leq .001$), income ($B = -0.125$, $P \leq .00$) and academic status ($B = -0.064$, $P = .013$) (Table 5).

4 | DISCUSSION

Pandemics such as COVID-19, are not just a medical phenomenon, they impact the quality of life in an individual and as a whole, and may cause stigma, fear and panic that are associated with mental health.^{11,13} As the global prevalence increases, people start isolate themselves physically, restrict social interaction and enter a constant state of fear and stigma towards effected people and their contacts.¹² In the current study, the prevalence of stigma and fear among people in Jordan during COVID-19 pandemic and associated factors were examined in Jordan during COVID-19 pandemic.

The current study found that the prevalence of fear among the participants was 52.7%. Many respondents mentioned that they are very afraid of the COVID-19 virus and feeling uncomfortable thinking about it or when watching news and stories related to the pandemic on social media. This was consistent with a previous study by Roy et al that showed that about half of the respondents were afraid of the COVID-19 pandemic reports on the media and that roughly 40% had paranoia at the thought of being infected with the new COVID-19 virus.¹⁴ The same study also reported that 72% of participants had concerns for themselves and their loved ones during the COVID-19 virus pandemic.¹⁴

The current study found that the prevalence of stigma towards infected people and exposed to infected people among the participants was 64.8%. Many respondents agree that people who have been infected with COVID or contacted a patient should expect some restrictions on their freedom and should be isolated.

	No		Yes	
	Count	Row N %	Count	Row N %
1. People who were infected with COVID-19 did not meet the standards for personal hygiene	889	54.3%	747	45.7%
2 infection with COVID-19 is a punishment from God	1249	76.2%	391	23.8%
3. Those infected with COVID-19 should be ashamed of themselves	1201	73.9%	425	26.1%
4. It is safe to deal with people who have been infected with COVID-19 disease	827	50.8%	802	49.2%
5. People who have been infected with COVID-19 should expect some restrictions on their freedom.	539	33.2%	1086	66.8%
6. Previous COVID-19 patients have to be isolated	374	22.9%	1258	77.1%
7. I do not want to be a friend of someone who has been infected with COVID-19 infection.	1082	66.6%	542	33.4%
8. It should not be allowed to work for those who have been infected with COVID-19	855	52.6%	772	47.4%

TABLE 2 Response regarding stigma towards COVID-19 infected people and who exposed to them

TABLE 3 Responses regarding fear items from COVID-19 among participants

	Mean	Std. Deviation
1. I am very afraid of the COVID-19 virus	3.67	1.200
2. I feel uncomfortable thinking about the COVID-19 virus	3.50	1.193
3. I don't work when I think about COVID-19 virus.	2.87	1.352
4. I am afraid to lose my life due to COVID-19 virus	2.99	1.335
5. When I watch news and stories about the COVID-19 virus on social media, I am tense or anxious.	3.27	1.290
6. I can't sleep because I am worried about infection with the COVID-19 virus.	2.76	1.382
7. My heart speeds or beats when I think about infection with COVID-19 virus	2.86	1.387

Healthcare practitioners and patients who have been cured of COVID-19 are being stigmatised and discriminated globally.¹⁵ According to Bagcchi, stigma related to COVID-19 creates dire risks to the lives of healthcare practitioners, patients, and those who have been cured of the virus. In May 2020, many medical institutions advocate protecting infected patient with COVID-19 and targeted healthcare practitioners and facilities of healthcare during the COVID-19 virus crisis.¹⁶

Several instances of stigmatisation of health care practitioners, COVID-19 patients, and survivors of the disease have

been witnessed during the global COVID-19 virus pandemic.¹⁷ For example, previous infected people, doctors and nurses in Mexico were seen using bicycles because they were reportedly denied public transport, they also faced physical attacks.^{18,19} Similarly, recovered patients from COVID-19 infection and healthcare practitioners in Malawi were reportedly denied access to public transportation, experienced insults in the streets, and faced evictions from their rented homes.²⁰ Media reports in Jordan revealed that recovered people, doctors and medical practitioners handling patients of COVID-19 faced significant social alienation, they were compelled to move from their rented houses and were sometimes assaulted in the ordinary course of their work.²¹ Regarding the social stigma of COVID-19 patients, an incident occurred in India and China where a family allegedly abandoned their expectant kin because she tested positive for SARS-CoV-2 when she delivered a baby in a Maharashtra state hospital.

Sometimes, survivors of COVID-19 experienced social media stalking.²² According to media reports, a survivor of COVID-19 in Harare, Zimbabwe, was surprised when a road close to his home was named "COVID-19 road." At the same time, some individuals opted to avoid the road because they feared they might contract an infection.²³

In India, a surgery professor and Covid-19 said that COVID-19 pandemic has "resulted in unexpected fear in the minds of many people in many more countries." He also noted that health workers have naturally been targeted by society, making them be mentally stressed.²⁴

The above examples from previous studies indicate that people lack a clear understanding of the transmission modes of the COVID-19 virus²¹⁻²³ and to non-scientific assumptions and inadequate understanding of the nature of the virus. For example, some individuals assume that recovered patients and healthcare workers in a hospital can potentially cause an infection. This includes ambulance drivers,

TABLE 4 Predictors of stigma towards COVID-19 among respondents

Model		Unstandardised Coefficients		Standardised Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	13.854	0.544		25.467	0.001
	Age	−0.029	0.007	−0.118	−3.969	0.001
	Sex	−0.449	0.119	−0.093	−3.768	0.001
	Type of Job	−0.031	0.091	−0.009	−0.342	0.732
	Monthly Income	−0.444	0.092	−0.125	−4.817	0.001
	Social status	−0.182	0.119	−0.045	−1.532	0.126
	Degree	−0.116	0.047	−0.064	−2.491	0.013
	Living area	0.194	0.121	0.041	1.601	0.110

Note: Dependent Variable: Stigma towards COVID-19.

TABLE 5 Predictors of fear towards COVID-19 among respondents

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	17.280	2.077		8.318	0.001
	Age	0.030	0.024	0.036	1.238	0.216
	Sex	0.722	0.387	0.045	1.866	0.062
	Type of Job	−0.395	0.294	−0.033	−1.343	0.179
	Monthly earning	−2.464	0.301	−0.208	−8.193	0.001
	Social status	−0.279	0.381	−0.021	−0.731	0.465
	Academic degree	−0.533	0.150	−0.089	−3.548	0.001
	Living area	0.533	0.393	0.034	1.356	0.175

Note: Dependent Variable: Fear.

relatives of patients suffering from COVID-19, and even patients who get hospital discharges after surviving the virus.²⁵ A study in Italy found that healthcare practitioners have been publicly harassed because they have been considered to "pose higher transmission threats."¹³ Additionally, according to,²⁶ a significant percentage of the people live in rural areas, where there are low literacy levels and increased stigma towards mental illness. People who lack COVID-19 knowledge and have a higher shame on mental health may be at risk of psychological stress and, in extreme instances, contemplate suicide.

4.1 | Predictors for fear from COVID-19 outbreak

It is generally to understand the impact of demographic characteristics during the pandemic.²⁷ Some demographic variables have found to be related to emotional response. The current study found that the predictors of fear during COVID-19 outbreak were income and academic degree and downloaded the tracing COVID-19 technology. This was not consistent with previous studies who found

gender is not impacted fear towards pandemic such as COVID-19 outbreak. However, in previous studies those men perceived lower levels of risk of pandemic relative to women, a finding that is typically attributed to sociopolitical factors not for knowledge deficits.²⁸ Another study found a remarkable sense of fear and worry among respondents, especially among females.²⁹ Similar findings were reported in China with Wang et al, where female students rated their fear as moderate-to-severe during the initial phase of the COVID-19 outbreak in China.³⁰ Age was another predictor in the previous studies for fear towards pandemic but not in the current study.³¹ Presumably, older individuals are more skilled at emotion regulation than their younger counterparts and therefore expressing lower level of fear than old people.

People who experience more fear are exhibited public health-compliant behaviors such as (downloading COVID-19 application). It is of interest that the measures of fear and anxiety symptoms were stronger predictors than moral and political orientation, all of which explained small to no variance, potentially suggesting more emotional (rather than sociopolitical) influences on compliant behavior.³²

4.2 | Predictors of stigma towards COVID-19 outbreak

The predictors of stigma towards infected people with COVID-19 and their contact were income, living area, and downloaded application to trace COVID-19 cases. This was first study to examine the stigma among people. However, Kelly et al studied the predictors among survivors from pandemics and found recovered people aged 20-49 and had higher education are more risk to experience stigma³³ regardless culture and country. One plausible explanation is lacking information of emerging infectious diseases and how to handle the situation. Large-scale infectious disease outbreaks of high severity were still uncommon to most countries.³⁴ The solution of this problem will be by dissemination of health information in an appropriate and accurate manner among media.²¹⁻²³

4.3 | Implication for the practice

Current study provides preliminary data of the impact of COVID-19 on mental health among Jordanians. Studies are also helping to understand the challenges of mental health in the pandemic of COVID-19. Cross-cultural studies have also been outlined in exploring the regional change of fear in the COVID-19 pandemic. Lastly qualitative studies clarify how people adjust with pandemic and how psychosocial support help them. These data are very important in the future of pandemic management.

5 | CONCLUSION

Pandemics such as COVID-19, are not just a medical phenomenon, it impact the quality of life in an individual and as a whole, and may cause stigma, fear and panic are the common problems Over 50% of the respondents affected had fear and sixty-four percent had stigma during as a result of the COVID-19 pandemic. There were predictors for fear and stigma towards COVID-19 outbreak. Our findings suggested that COVID-19 has substantially affected individuals' mental health. One key policy implication of the present study is that governments should provide psychological support to citizens during a pandemic.

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